Cold Climate Housing Research Center

CCHRC

Hybrid Micro Energy Program
Award No. 01163
Quarterly Report: October 1, 2012 to December 31, 2012

Per the terms of the Hybrid Micro-Energy Program (HMEP) grant agreement, the three priority renewable energy systems to be evaluated are:

A small scale biomass combined heat and power (CHP) system that can convert wood into heat and power for use in small scale loads including residences, small community facilities, and potentially small communities and/or neighborhoods.

This portion of the grant was completed with the submission of the final report on March 29th, 2012.

A ground source heat pump project that includes solar thermal collection to recharge the ground

The school district had a heat pump repair expert come in and fix the heat pump itself so that it runs well. The system ran well for a three day period; however, a control system switch malfunction rendered the system inoperable. The school district should fix the switch any day now and then we will work together to optimize the control system.

Additionally, CCHRC began planning a qualitative analysis of successes, problems, and lessons learned from multiple heat pump case studies in Interior Alaska. This work is complimentary to both the rationale for the Weller GSHP project and to prior work performed through the technology assessment *Ground Source Heat Pumps in Cold Climates*.

A combined solar photovoltaic (PV) and wind system integrated into an energy efficient load design.

This portion of the grant was completed with the submission of the final report on March 29th, 2012.